

¹⁹⁹Tl

¹⁹⁹Tl was discovered in 1949 by Orth et al. as reported in “Radioactive thallium isotopes produced from gold” (1949Or01). The Berkeley 60-inch cyclotron was used to irradiate gold targets with 28 MeV ⁴He beams to form ¹⁹⁹Tl in (α ,2n). Decay curves were recorded following chemical separation. “The maximum yields of 1.8-hour, 7-hour, and 27-hour thallium were obtained at 38 Mev, 28 Mev, and 20 Mev, respectively. The thresholds were in the same decreasing order but were not well defined by these experiments. These data suggest (α ,3n), (α ,2n), and (α ,n) reactions leading to Tl¹⁹⁸, Tl¹⁹⁹, and Tl²⁰⁰, respectively.”

Adapted from reference (2013Fr04)

1949Or01 D. A. Orth, L. Marquez, W. J. Heiman, and D. H. Templeton, Phys. Rev. **75**, 1100 (1949).

2013Fr04 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 365 (2013).

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